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Mercury observed in eagles

By MIKE STARK
Of The Gazette Staff

About 10 bald eagles from around Montana have shown up with heightened levels of mercury in recent months -- two have died -- and no one knows exactly why.

The unusual development is prompting a study this summer looking at the possible sources of mercury and whether more birds may be at risk.

The eagles brought into the Montana Raptor Conservation Center in Bozeman since December have had varying levels of mercury. They have come from points throughout Montana including Lincoln, Red Lodge, Fort Benton and near Dillon.

"We're getting them from pretty much all over," said Radell Key of the Montana Raptor Conservation Center.

Several months ago, an eagle was brought in that appeared to show clinical signs of lead poisoning. The bird tested negative for lead but positive for mercury. Since then, officials have been testing bald eagles for mercury, something they hadn't done in the past.

It's too early to tell whether the discovery of 10 to 12 bald eagles with heightened levels of mercury is simply a result of investigators looking for them or whether something else is going on.

"We don't know," Key said.

"It's just something we've started looking at."

Although Montana's overall bald eagle population continues to do well, those found with mercury "raise some red flags," said Kristi DuBois, chairwoman of the Montana Bald Eagle Working Group and native-species coordinator for Montana Fish, Wildlife and Parks.

"The fact that there are a few birds that died may be a warning sign for us," DuBois said. "The key is to find where it's coming from."

Mercury is a widespread element that occurs naturally in certain types of soils and rocks. It's also a pollutant associated with coal-fired power plants, mines, burning garbage and other human-related operations.

Once it's in the water, mercury is typically converted to methylmercury by bacteria, which fish and other animals absorb and retain in their muscle tissue. When an eagle, osprey or other animal along the food chain eats that fish, it gets the poisonous mercury along with its meal.

One of the keys with the latest cases in bald eagles will be figuring out whether the bald eagles were residents, migrants or visitors from Canada, DuBois said.

"It's hard to say whether they were Montana eagles or not," said DuBois, whose agency has agreed to pay for a portion of the study.

The study will examine blood, feathers and carcasses from bald eagles and osprey in southwestern Montana. Because newly deposited mercury is more readily converted to methylmercury, contamination in the upcoming investigation could indicate recent exposure and may point to pollution "hot spots," according to an outline of the study.

The discovery comes as the U.S. Fish and Wildlife Service is proposing to remove bald eagles from the endangered species list.

The bird's recovery, heralded as a national conservation success story, is attributed largely to a 1972 ban on the pesticide DDT, which caused eagles' eggs to thin and break, and increased efforts to protect its habitat, crack down on poaching and implement captive breeding and reintroduction programs.

In the Lower 48 in 1963, there were an estimated 487 active nest sites. Today, there are more than 7,000 breeding pairs. In Montana, where in 1978 there were just 12 breeding pairs, today there are nearly 400.

Although worries about DDT have subsided since the pesticide's ban, concern has continued about mercury, which is dangerous to both people and animals.

There are 37 lakes and waterways in Montana with advisories about eating fish containing mercury, said Don Skaar, a pollution control biologist with FWP.

Unlike other metals, mercury hangs on tenaciously as it's consumed with muscle tissue.

"It's kind of a classic food-chain thing," Skaar said.

In eagles and osprey, mercury can affect reproduction, behavior and development of cells.

ABC News

Mercury Contamination Moves Beyond Fish

'Every Link of the Food Chain Affected' a New Report Says

By LAURA MARQUEZ

Sept. 18, 2006 — - Mercury contamination is making its way into nearly every habitat in the United States, not just oceans, according to a report that the National Wildlife Federation will release Tuesday.

The problem with high mercury levels in certain types of fish has been well documented, resulting in 46 states issuing advisories for pregnant women and children to avoid eating certain types of fish, including tuna and swordfish. High levels of mercury can lead to a wide range of physical ills, including kidney and neurological damage, and can cause fatigue, vision problems and tremors.

But this is the first report to expose the problem in such a wide variety of species, 40 to be exact.

The report "underscored how pervasive mercury contamination has become," according to Felice Stadler at the National Wildlife Federation. "Nearly every aspect of our food web has been contaminated. It's difficult to find an ecosystem that's not contaminated, whether it's ocean or forest or coastal waters or wetlands."

Scientists found high levels of mercury in bald eagles, songbirds, polar bears and alligators, to name just a few species. Alligator meat is very popular in the southeast, but there is no advisory against eating alligator meat.

Last year Utah issued an advisory for duck hunters, warning people to limit or avoid eating certain duck species because of high levels of mercury.

Stadler said this report "raises the question of what ecosystems are safe and immune from toxic contamination."

Mercury is a naturally occurring element, but people release much more mercury pollution that ends up in our forests, lakes, and streams -- 100 tons in this country alone annually. The primary sources include coal-burning power plants, wastewater treatment plants and waste incinerators.

The mercury pollution is affecting the reproduction and behavior of fish and wildlife. The report's findings suggest birds with high levels of mercury lay fewer eggs, and the motor skills of certain mammals have been diminished, which affects their ability to hunt and therefore survive.

The report points out "there truly is no link in the food chain untouched by mercury," and according to Stadler, this carries broad implications for humans.

"The research shows birds that eat contaminated insects get contaminated themselves," Stadler said. "Turkeys and chickens, which humans eat, eat those same contaminated insects, so this is the tip of the iceberg."

There is some good news in an otherwise glum report: Mercury poisoning is reversible.

Stadler pointed to several states that in recent years have taken steps to cut mercury emissions, including Florida, Wisconsin, New Hampshire and Massachusetts.

And in a much shorter time than expected, the mercury levels in those states' fish and wildlife populations have dropped

Stadler, who's been working on the issue of mercury pollution for 10 years, said she was originally told it would take 50 years before scientists would see some reversal.

"But it's happening much faster than we ever thought, five to six years," she said.

Stadler said she believes the key is for this country -- and the whole world for that matter -- to realize just how big a threat mercury pollution is to our ecosystems.

"We need to be as drastic at cutting mercury as we have been in cutting lead," she said.